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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re application of:

Examiner: Marc A. Patterson

ITO, *et al*

Group Art Unit: 1772

Serial No.: 09/492,173

Filing Date: January 27, 2000

For: HEAT SHRINKABLE POLYESTER FILM

DECLARATION UNDER 37 CFR §1.132

Assistant Commissioner for Patents

Washington, DC 20231

Dear Sir:

1. I, Masatoshi Hashimoto, have the following postal address:

Toyo Boseki Kabushiki Kaisha, Inuyama Plant at 344, Maehata, Kotsu-aza, Oaza, Inuyama-shi, Aichi-ken, Japan

2. I received Bachelor's degree in Faculty of Engineering from Muroran Institute of Technology in March, 1991.

3. Based on my experience with the subject matter of the above-identified application, I conducted the following experiment to demonstrate that the polyester films disclosed on Fukuda *et al* (U.S. Patent Number 4,985,538) do not satisfy the properties recited in the claims of the above-identified application.

4. I understand that together with this declaration, claim amendments will be submitted in the USPTO for the above-identified application, and I therefore refer to the amended claims herein.

5. In order to evaluate the physical properties of the films disclosed in Fukuda *et al*, I carried out the production example described in Example 14 of Fukuda *et al* (col 20 lines 38-68 and table 7, top line) to produce a Comparative Film. I consider that Example 14 of Fukuda *et al* is the most similar film to the films of my invention. I then measured the physical properties of the Comparative Film.

6. Firstly, to confirm that the Comparative Film is an accurate reproduction of the film of Fukuda *et al*, Table 1 shows the comparison of the measurements of the Comparative Film with the results shown in Fukuda *et al*. As can be seen, the composition and physical properties of the Comparative Film are practically identical to those described in Example 14 of Fukuda *et al*.

7. Table 2 shows the comparison between the properties required by the claim elements of the amended claims (shrinkage, haze and adhesive retention), and the measurements taken from the Comparative Film. As can be seen, the Comparative Film has a shrinkage along the major axis after 5 seconds at 70°C is 49%, which is well outside the range of the amended claims (10%-40%).

8. Therefore, I consider that the film disclosed in Example 14 of Fukuda *et al* does not satisfy the elements of the amended claims of the above-identified application.

9. I further declare that all statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Executed on July 29, 2003

Masatoshi Hashimoto  
(Masatoshi Hashimoto)



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**Table 1: Duplication of results from Fukuda *et al*:**

	<b>Example 14 (or 15)</b>	<b>Comparative Film</b>
<b>Ratio of polymer components</b>	IV=0.70, Tg=66°C	IV=0.70, Tg=66°C
	TPA/IPA/EG/DEG 80/20//98/2(mol%)	TPA/IPA/EG=80/20//100 (mol%)
	Spherical silica 500ppm having an average grain diameter of 0.8μm	An average grain diameter of 1.5μm, silica 490ppm
<b>Conditions for Extrusion</b>	260 °C	260 °C
<b>Conditions for Drawing</b>		
Preheating		80 °C
Drawing	70 °C	70 °C
Thermosetting	Heating at 75 °C for 10 sec	75 °C
Drawing factor in the traverse direction	3.2	3.2
<b>Characteristics of Drawn film</b>		
Thickness	40μm	40μm
Shrinkage in hot water MD/TD (5sec, 75°C) (%)	-1/48	0/53
Birefringence	0.067	0.06
Neck in rate (%)	12	17
<b>Shrinkage characteristics</b>		
Adhesion	good	good
Crease	good	good
Total	good	good

**Table 2: Comparison with Claim elements:**

<b>Property</b>	<b>Claim element</b>	<b>Comparative Film</b>
Shrinkage along the major axis in hot water	10-40% (70 °C, 5sec)/ 50% or more (95 °C, 5sec)	<b><u>70°C: 49%</u></b>
Shrinkage along the orthogonal direction in hot water	10% or less (95°C, 5sec)	good
Film haze (at 50μm)	3 to 10%	5%
Adhesive retention of a label	95% or more (after shrinkage)	good